

Stress, eustress and the National Student Survey

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The aim was to explore the relationship between sources of stress and a range of coping behaviours on student satisfaction and motivation. Most research exploring sources of stress construes stress as distress, with little attempt to consider positive, good stress or 'eustress' experiences. A cohort of first-year psychology students (N=88) were surveyed on a range of stressors. These were amended from the UK National Student Survey (NSS, 2011). Published university league tables draw heavily on student course satisfaction but study results suggest there was also merit in measuring students' intellectual motivation and the extent to which they felt part of a learning community. Using multiple regression analyses, it was found that even the attributes that normally help one to adjust to change, such as self-efficacy, do little to help the new student adjust to university life, such was the acuteness of perceived stress in the first year. Social opportunities within the university were important to help new students integrate into university life and to help them network and build support. Educators need to consider how course experiences contribute, not just to potential distress but to potential eustress.

Keywords: student stress; eustress; coping; satisfaction; motivation; learning, transition.

Introduction

STRESS can be the result of 'too much or too little arousal resulting in harm to mind and body' (Schafer 1992, p.14). There is a growing body of evidence that has looked at stress among university students and its affect on wellbeing (Leicester University, 2002; Robotham & Claire, 2006)

As illustrated in Figure 1, a certain amount of perceived stress and physiological arousal is necessary if one is to perform at the optimum (B). If a source of stress is perceived as negligible (A) or, more likely, is perceived as exceeding one's capacity to cope (C), then distress results (Yerkes & Dodson, 1908). That optimal level of stress or arousal is called 'eustress' (Lazarus & Folkman, 1984) and little research has looked at sources of eustress in students (Association for University Counsellors, 2002; Gibbons, 2008, 2010; Leicester University, 2002).

Sources of academic stress include examinations and assessments (Robotham & Claire, 2006); fear of failure; the quality of teaching, as well as lack of timely feedback on assessments (Gibbons, 2008, 2010). Personal sources of stress include financial

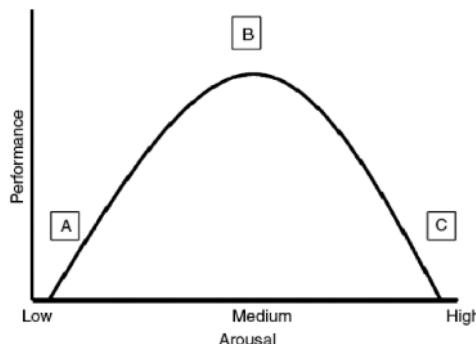
concerns; a lack of or difficulties in managing one's apparent free time and a concern about career direction (Leicester University, 2002).

The National Student Survey and stress in students

The National Student Survey (NSS) was first introduced in 2005 and it was a product of the 2003 Government White Paper, 'The Future of Higher Education'. The theme of this White Paper was to make students 'intelligent customers'. The survey involves students rating a number of common experiences, for example, teaching and learning, assessment and feedback, learning resources, etc., and in this study each of these factors was treated as a potential source of stress.

The NSS was initially met with resistance by many universities because it was seen as duplicating internal feedback mechanisms. However, once the findings were incorporated into university league tables by national newspapers it took on a whole new importance.

Figure 1: The Yerkes–Dodson curve.



The results of university league tables, underwritten by the findings from the NSS, focus exclusively on measures of course satisfaction, although NSS questions exist that measure intellectual motivation and the extent to which students feel part of a learning community (NSS, 2011). This study considered all three and while the validity of the NSS is often challenged (e.g. Sabri, 2013), it is used here because it is, de facto, the recognised measure of the university student experience.

Coping with stress

In Lazarus and Folkman's (1984) Transactional model of stress, the primary appraisal refers to the initial perception about a stressor and whether it is judged to be positive (leading to eustress), negative (leading to distress) or benign. The secondary appraisal refers to the coping responses the individual draws on. Interacting between the perception of stress and how one responds are a number of moderators. These include personality (McCrea & Costa, 1992); self-efficacy (Schaubroeck & Merritt, 1997); perceived control, support and coping style (e.g. Gibbons, 2010; Van der Doef & Maes, 1999). While these different coping resources or moderators are drawn on to manage perceived sources of stress, it is important to remember that they also affect the initial judgement and appraisal of stress and, in turn, its subsequent impact on well-being. The NSS measures final year students' perceptions. This study will explore the

perception of students in their first year. Perceptions of stress change the more one experiences such demands and for that reason it is not the intention to draw any conclusions about final year student experience. However, there is merit in exploring the experience of first-year students because attrition and retention issues are greatest among first-year students throughout the UK (Chemers et al., 2001)

Aims

The literature drawing on the NSS makes almost no reference to students' intellectual motivation, nor the extent to which students feel part of a learning community. Similarly, little attention has been given to the experiences associated with optimal levels of stress or eustress, among first-year students (Gibbons, 2012). The aim of this study was to address these short-comings. Significant positive correlations were expected between the student experiences rated as potential eustress (uplifting ratings) and course satisfaction, motivation and feeling part of a learning community; and significant negative correlations were expected for the distress (hassle ratings); significant correlations were expected between the coping factors, that is, personality, self-efficacy, control, support and coping style against course satisfaction, motivation and feeling part of a learning community.

Method

A student questionnaire was given to all first-year BSc psychology students to complete on a voluntary basis early in their second semester at a university in Northern Ireland. The questionnaire consisted of items from the NSS (2011) along with items from earlier NSS versions measuring intellectual motivation and feeling part of a learning community. Students used a continuous response scale rating each item twice – once as a potential uplift and once as potential hassle. Self-efficacy was measured using the Generalised Self-efficacy scale (Schwarzer, 1992). Across a range of samples there is good

evidence of convergent and discriminant validity and it has produced test, retest reliability values from .69 to .80 (e.g. Chen, Gully & Eden, 2001). A range of coping factors were measured using the Brief Cope (Carver, 1997). The grouping of the items was based on earlier factor analysis research (Gibbons, 2009). The short version of Costa and McCrea's (2004) Five-factor inventory was used to measure extraversion, agreeableness, conscientiousness, neuroticism and openness. More than acceptable evidence for its validity and reliability have been offered across several studies (e.g. Gosling, Rentfrow & Swann, 2003). All the questionnaires were numbered and confidentiality was maintained. In total 88 were returned, this accounted for 55 per cent of the cohort. Students were informed that they were free to withdraw at any time and that being involved would mean they would be eligible to apply for course credit.

Results

Data from 88 participants were entered into the analysis. The mean age was 22 years, 79 per cent ($N=70$) were female and 21 per cent ($N=18$) male. Pearson's correlations and *t*-tests were undertaken for each outcome measure (course satisfaction, motivation and feeling part of a learning community) against demographic factors, the sources of stress rated as hassles and again as uplifts, and for personality, coping and self-efficacy measures. Those predictors that were significant for a particular outcome measure were entered into a stepwise multiple regression until the most parsimonious model was established.

For the regression model with feeling part of a learning community the *R* squared was .423 and the adjusted *R* squared .362. For the model with intellectual motivation as the outcome the *R* squared was .328 and the adjusted *R* squared .256. For the model with course satisfaction, the *R* squared was .307 and the adjusted *R* squared .263.

Discussion

Learning community

The outcome measure in the first model looked at the extent to which students felt part of a group committed to learning and exploring academic interests. In terms of sources of stress, those rated as a hassle were stronger predictors of scores on learning community compared to those rated as an uplift. The one exception was that when learning resources were rated as an uplift, scores on feeling part of a learning community increased, though the relationship was only a trend. Learning resources refer to library and IT resources and the more students rated these as helping the more they felt part of a learning community.

Course delivery was a source of stress and referred to the learning materials provided; the pedagogic strategies used and how stimulated the students were by this. The more this was rated as a hassle the less students felt part of a learning community.

The more the university support facilities (i.e. the University Student Guidance Centre, personal tutors and other students) were rated as a hassle, the lower were the scores on learning community. The value of peer support above the infra-structure of support provided by the university has been found in earlier work (Gibbons, 2010), and it may have been this element that was the most important within this broad measure of support used: As students adjust to the new and challenging demands on their course they turn to their peers for social comparison and to help manage these demands. Their peers are perceived as being able to offer more immediate support and empathy. Moreover, students may feel that seeking out help through formal support links involves more effort and perhaps may leave the student doubting their competence compared to conversations with other students where learning issues can be discussed and resolved at an earlier stage.

The measure 'social opportunities' referred to the provision of formal opportunities on the course to interact with other

students and, across the university, in terms of social events, clubs and societies. The more social opportunities were rated as a hassle the lower were the scores on learning community. This highlights the importance of support and social engagement not just within the course but as an important part of the wider experience of being a student. Such wider social opportunities will invariably involve time with some students on their course and some that are not. Where students experience disappointment with such opportunities it appears to make them less likely to engage with peers in a learning context on their course (i.e. to feel part of a learning community).

In general, the dominance of hassles over uplifting ratings across all the regression models may be more indicative of the stage these first year students are at in their transition to university life. They are facing differences in pedagogy and how one learns at university compared to earlier learning, and this is to say nothing of the demands of financial management, independent living and forming new relationships, common for most first-year students. A source of stress that is new and difficult to manage can have significant stress effects as one masters the right strategies and this may explain the dominance of hassle over uplifting ratings.

It may also be the case that it is not meaningful to rate some of the sources of stress as potential uplifts, for example, course content and structure and careers advice. Such factors are unlikely to be rated as uplifting even when students are satisfied with them because, in such circumstances, these experiences would be seen as a normal part of the course. However, if students are dissatisfied with such factors it is likely that they will be rated as a hassle. A similar distinction was made by Herzberg (1959) between hygiene factors and motivators. In a work context, hygiene factors can include the physical work environment and status at work and which, if present, do not increase motivation or satisfaction but if absent do contribute to dissatisfaction.

In terms of coping and personality, dispositional control and openness were significant predictors. The stronger the students' sense of control or the more open their personality the more they felt part of a learning community. It is likely that as a sense of control increased so too does autonomy and learning independence and, in this case, a willingness to engage in learning with others.

Openness was a positive predictor. This suggests that a willingness and interest to explore new ideas goes hand in hand with feeling part of a learning community. Interestingly, none of the other aspects of personality, such as extraversion and self-efficacy or effective coping strategies, such as approach based coping, featured in any regression model. A possible explanation may link to the fact that these students were mid-way through their first year and the demands of adjusting to university life are likely to remain high for many – both in the university, in terms of how one is expected to learn, and outside in terms of the demands associated with being a new student and in establishing a work-life balance. The challenge of being a new student may mean that even those with the attributes that normally help are often overwhelmed by the demands involved in adjusting to university life. This is likely to explain the prevalence of hassles ratings over uplifting ones and the absence of attributes that are often found associated with learning and achievement.

Intellectual motivation

The outcome measure in the second model was intellectual motivation. The predictor with the largest Beta value was the work-home interface. This referred to measures on personal and family health; to important relationships and to personal aspects of one's life. The more these were rated as positive and uplifting the less, ironically, were reported scores on intellectual motivation. It may be the case that the more personal and family relationships and one's health are valued (the work-home interface measure)

the more students are likely to engage with friends and family and this may sometimes be at the expense of the time spent studying and this affects intellectual motivation. Unlike the rest of the UK, most students in Northern Ireland are home students and the culture is not just to return home during semester breaks but, for most students, to return home almost every weekend and substantial numbers live and commute from home. This finding suggests that students have yet to find the balance between the time spent with family and friends and the time needed to engage fully with their studies.

As with the earlier regression model, the more social opportunities were rated as a hassle the lower were scores on intellectual motivation and a similar explanation may apply: that is, disappointments with formal 'social opportunities' meant students engaged less with others on their course and this impacted on their intellectual motivation. However, given the value of peer support in enhancing learning, wellbeing and satisfaction (Gibbons et al., 2008, 2010), it is likely that where students are able to benefit from such support, it will have a positive impact on intellectual motivation. The challenge is to make the social opportunities, both those course specific and university wide, of a kind that students feel they can engage in.

As anticipated, openness was a significant predictor of higher scores on intellectual motivation, and where learning resources were valued, intellectual motivation increased. The more students felt the content and structure of the course was less relevant and the more they rated the learning and teaching strategies as a hassle, the lower were scores on intellectual motivation. In these final examples the predictors were not significant but they did make for the most parsimonious model and so it is important that educators remain focused on searching for new ways to engage their students and that the demands of research mean they do not lose sight of students' learning needs.

Course satisfaction

The outcome measure in the final model was course satisfaction and it was found that the more teaching was rated as uplifting and the more the structure and relevance of the course was clear the higher were scores on course satisfaction and vice versa when rated as a hassle. Social opportunities was a predictor in all three models and it is likely that the more students can network and engage with others on the course and through clubs and societies the better placed they are to integrate into the wider university life. Their friendship networks may increase, their confidence and enjoyment may grow and this puts them in a better position to adapt to and engage more with the demands on their course. The challenge in a university where so many students commute home so frequently is to offer social opportunities which are enticing enough to make students want to stay. Integrating more social opportunities during the teaching week, through clubs and societies and sports, could be considered and networking benefits could be achieved by extending the induction period at the start of the course, by integrating more peer-based learning in lectures and including more or frontloading more small-group personal tutorials in the first semester. Such initiatives could help increase a students' support network.

Limitations

There were a number of limitations, most notable was the use of the NSS with an assumed validity. It was used because its completion by final-year students across the UK underpins university league tables and so it is, *de facto*, a recognised measure of the student experience. However, there is much that still needs to be done to establish a level of validity that matches its frequency of use. Other limitations link to the choice of a survey design. The sample type was voluntary and while the response rate from the target population was not untypical (55 per cent), a larger sample would allow for more variables to be entered into the regression models and interaction effects to be tested.

Summary and conclusions

Common factors linked to feeling part of a learning community included library and IT resources; learning resources and pedagogic strategies; university support facilities and the social opportunities available. This final factor was in all three regression models and it may be the support element that was particularly important. The different demands students were asked to rate were more frequently rated as a hassle than as an uplift (12 to four respectively). This finding, along with the absence of the types of coping and dispositional attributes normally linked to satisfaction and wellbeing (Gibbons, 2012), may well reflect a particularly anxious period of adjustment for students early in their studies. Moreover, some of the sources of stress may equate to Herzberg's hygiene factors where it may not be appropriate to rate them as potential uplifting factors and the questionnaire should be re-configured to reflect this.

With intellectual motivation, the work-home interface was a predictor but in a counter-intuitive way: when rated as an uplift, intellectual motivation fell. It was suggested that this was linked to balancing course demands with time spent with family and friends. Openness and dispositional control were important predictors with the first two models. Other than these, there was a conspicuous absence of personality traits and coping strategies normally associated with positive outcome measures and this may reflect the acute stress involved in the early transition to university life. Where research has found such dispositional influences are predictive it is with samples of second and final year students (Gibbons, 2008, 2010).

Recommendations

To effectively review the student experience one should draw on several outcome measures. University league tables based on NSS course satisfaction results could offer more meaningful insights if the results on learning community and intellectual motivation were also considered.

The early part of the first year is a period of acute stress for many and this may explain why retention and attrition are particular issues in the first year. It is important that educators are aware of this student experience and consider ways of building on the existing strategies to support them.

It is likely that an effective way to do this is to promote initiatives for students to interact and network more with each other and not just during induction week but throughout the first semester, for example, through class exercises, by rotating group composition in group activities in tutorials and lab classes, by introducing paired one to two minutes exercises in lectures and by supporting subject society events.

Making students aware of the evidence that the first year is a particularly challenging time and why is critical. It is important that students who experience associated anxiety do not see this as a reflection of their ability or inability as individual learners but of the circumstances and challenges the first year poses.

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